

Notice of Allowability

Application No.

10/616,964

Applicant(s)

CHUN, BYUNG-JIN

Examiner

Charles Chow

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/27/2006.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Detailed Action

1. This office action is for amendment received on 4/27/2006.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Claims 1-32 are allowable over the prior art of record. The prior arts fail to teach the allowable features, singly, particularly, or in combination.

For the independent claims, the primary reference, **LUZ-'019B1**, has a later effective filing date of 4/10/2003, while applicant has foreign priority date of 7/13/2002, & **Schiemenz-'972** fails to teach or touch the topic of, the distributing of the antenna sector loads according to respective sectors.

The cited prior arts fail to teach the apparatus, the method, for a power pooling to uniformly distribute the sector loading in a mobile communication system, having a distributor for distributing signal from signal generator according to respective sectors [the dynamic matrix determination in Fig. 11];

a radio signal processor for providing an output of the distributor to antenna;

a adaptive signal processor for determining a characteristic matrix of the distributor by using an output in a predetermined position on a signal processing path of the radio signal processor, and providing the characteristic matrix of the distributor to the distributor [in claims 1, 17], in order to reduce the traffic loading by dynamically reconfiguring of the antenna sector loading at predetermined positions.

The dependent claims are also allowable due to their dependency upon the independent claim and comprising additional claimed features associated to the features of the independent claims.

The closest prior art **Luz et al. (US 6,738,019 B1)**, having later effective filing date) teaches the driving of the sector transmitting antenna 401 from the signal rearrangement in IFTM1-4 & FTM1-4 for leveling the loading of the amplifiers 525-523 [Fig. 5, abstract, col. 5, line 56 to col. 6, line 29]. Luz, having a later effective filing date, teaches the fixed couplers in 531, 503 for re-arrange signal A1, B2, C3, to antenna 401, but fails to teach the **adaptive signal processor for determining a characteristic matrix of the distributor by using an output in a predetermined position on a signal processing path of the radio signal processor, and providing the characteristic matrix of the distributor to the distributor. & the applicant's structure in Fig. 11**, of the dynamic determination via feedback path.

Schiemenz Jr. et al. (US 5,834,972) teaches the state sensor 126 for reconfiguring of the distributor, digital transform matrix 116 [col. 4, line 47 to col. 5, line 18], but fails to teach the uniformly distributing the sector antenna loading, for the associated distributor & radio signal processor, as shown in his Fig. 6.

Other prior arts in below were also considered, but they fail to teach the above allowable features. They are as follows:

Dent (US 5,574,967), Arnts (US 5,646,631), Gans et al. (US 5, 604,462), Wright et al. (US 6,342,810 B1), Reudink ete al. (US 5,955,920), Butler et al. (US 6,243,038 B1), Chesarek et al. (US 5,917,371), Eowland (US 6,006,111), Larking (US 6,381,212 B1), Thompson (US 5,966,048), Meredith (US 5,790,517).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

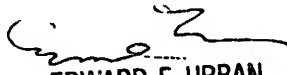
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow C.C.

May 14, 2006.


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